volume has now appeared.[6] The twenty-five species illustrated include six new species of Crataegus from Missouri, and new species from China or Japan under Ulmus, Berberis, and Viburnum (3). Four new species of Lonicera from China are described without illustration by REHDER, who also describes and illustrates a new hybrid under Malus. The tropical American (Florida and Mexico to Central America) species illustrated are *Alvaradoa amorphoides* Liebm., *Pinus Greggii* Engelm., and *P. Lumholtzii* Robinson and Fernald. The ten remaining species are from China or Japan, and belong to Berberis, Acer, Rhododendron, Viburnum (5), and Lonicera (2).—J. M. C.

Plant phyla.—Professor BESSEY[7] has been working for many years upon a natural (evolutionary) classification of plants, and the result has just appeared in published form. He recognizes fifteen great "phyla," and presents a diagram to illustrate their relationship. It is impossible to give any adequate conception of the scheme, for it is very compactly presented and includes an enormous mass of details. A glimpse of the point of view may be obtained from the following list of the "phyla," the number following each name indicating the number of families included: Myxophyceae (9), Protophyceae (17), Zygophyceae (21), Siphonophyceae (18), Phaeophyceae (23), Carpophyceae (26), Carpomyceteae (145), Bryophyta (54), Pteridophyta (13), Calamophyta (4), Lepidophyta (7), Cycadophyta (9), Gnetales (1), Strobilophyta (9), Anthophyta (280). The labor involved in organizing and defining these 636 families must have been enormous.—J. M. C.

American Breeders' Association.—The literature of breeding which is now growing with great rapidity is necessarily much scattered. The third annual report of the American Breeders' Association[8] contains a large number of papers covering a wide range of subjects relating to both plant and animal breeding. The papers which are of most interest to scientific breeders and students of heredity are "Inheritance in pedigree breeding of poultry" and "Recent advances in the theory of breeding," by C. B. DAVENPORT; "The production and fixation of new breeds," by W. E. CASTLE; "Some results in selecting red clover for disease resistance," by S. M. BAIN; "Heredity in carnation seedlings," by J. B. NORTON; "Report of the committee on theoretic research in heredity," by CHARLES W. WARD; "The chromosome in the transmission of hereditary characters," by W. J. SPILLMAN. There are also a number of excellent papers and reports which must be of the greatest value to breeders of the economic crops. One of the best of these

[6] SARGENT, C. S., Trees and shrubs. Illustrations of new or little known ligneous plants, prepared chiefly from material at the Arnold Arboretum of Harvard University. Vol. II. Part I. pp. 1–55. *pls. 101–125.* Boston and New York: Houghton, Mifflin & Company. 1907. $5.00.

[7] BESSEY, CHARLES E., A synopsis of plant phyla. Univ. Nebraska Studies 7:no. 4. pp. 100. 1907. Lincoln: University Publishing Company. 50 cents.

[8] Annual report of the American Breeders' Association, Vol. 3. 8vo. pp. 305. Washington, D. C. 1907.